

CLAIMS

1 1. A self-powered, mobile, substantially stationary
2 structure which comprises a spinning body substantially
3 enclosing a self-contained drive mechanism powered by
4 energy derived from electromagnetic radiations, and biased
5 by the direction of an ambient field of energy.

1 2. The structure of Claim 1 which further comprises:

2 a volume of fluid;

3 an enclosure substantially buoyantly supported by
4 said fluid;

5 a directional bearing locator associated with said
6 enclosure and responsive to said ambient field of energy;

7 means for collecting energy from said
8 electromagnetic radiation; and

9 wherein said drive mechanism comprises means for
10 moving said enclosures in reference to said locator and in
11 response to said means for collecting.

1 3. The structure of Claim 2 wherein said means for moving
2 comprise an electro-mechanical device for rotating said
3 enclosure about a first axis.

1 4. The structure of Claim 3 wherein:

2 said electromagnetic radiations comprise light
3 waves; and

4 said means for collecting comprise a photovoltaic

5 collector generating an electrical current when exposed to
6 said light waves.

1 5. The structure of Claim 4 wherein said electro-
2 mechanical device comprises an electrical motor energized
3 by said electrical current.

1 6. The structure of Claim 3 wherein:

2 said electromagnetic radiations comprise radio
3 frequency waves; and

4 said means for collecting comprise an antenna and
5 a radio frequency receiver generating an electrical
6 current when said antenna is exposed to said radio
7 frequency waves.

8 7. The structure of Claim 6, wherein said electro-
9 mechanical device comprises an electrical motor powered by
10 said electrical current.

1 8. The structure of Claim 3, wherein:

2 said ambient field of energy comprises the earth
3 gravity; and

4 said locator comprises a gravity force sensor.

1 9. The structure of Claim 8, wherein said gravity force
2 sensor comprise a weight mounted on an axle substantially
3 aligned with said axis; and

4 further comprises a magnet substantially parallel
5 to said axis.

1 10. The structure of Claim 3, wherein:

2 said ambient field of energy comprises the earth
3 magnetic field; and

4 said locator comprises means for detecting said
5 earth magnetic field.

1 11. The structure of Claim 3 which further comprises a
2 container holding said fluid; and

3 said enclosure is held within said container and
4 spaced apart thereof by said fluid.

5 12. The structure of Claim 11, wherein said enclosure and
1 said container are closed and said fluid substantially
2 surrounds said enclosure;

3 and wherein said enclosure and said container have
4 similar shapes.
5

1 13. The structure of Claim 12 wherein said enclosure and
2 said container consist of hollow spheres.

1 14. The structure of Claim 12, wherein:

2 said enclosure and said container are made of
3 light-permeable material;

4 said electromagnetic radiation comprises light

5. waves;

6 said means for collecting comprise a photovoltaic
7 collector, associated with said enclosure, generating an
8 electrical current when exposed to said light waves.

1 15. The structure of Claim 12, wherein:

2 said electromagnetic radiations comprise radio
3 frequency waves;

4 said means for collecting comprise an antenna and
5 a radio frequency receiver generating an electrical
6 current when said antenna is exposed to said radio
7 frequency waves;

8 said electro-mechanical device is powered by said
9 electrical current.

10 16. The structure of Claim 3, wherein said electro-
11 mechanical device comprises:

12 a motor having a rotor and a stator, one of said
13 rotor and stator being fixedly attached to said enclosure,
14 and the other fixedly attached to said locator.

1 17. The structure of Claim 3, wherein said ambient field
2 or energy comprises a magnetic field; and

3 said electro-mechanical device comprises:
4 at least one magnetic field sensor responsive
5 to said magnetic field; and

6 means for repeatedly enabling said sensor.

1 18. The structure of Claim 17, wherein said electro-
2 mechanical device further comprises an axle substantially
3 aligned with said axis, and said magnetic field sensor is
4 radially mounted around said axle.

1 19. The structure of Claim 18, wherein;

2 said sensor are rotatably connected to said axle
3 and fixedly attached to said enclosure:

4 and said axle is fixedly attached to said locator.

1 20. The structure of Claim 17, wherein said locator
2 comprises a magnetic field sensor.

1 21. The structure of Claim 17, wherein:

2 said sensor comprises an electromagnet which when
3 enabled rotatably aligns itself with said magnetic field;
4 and

5 said means for enabling comprise means for
6 selectively applying a feeding current to said
7 electromagnet.

1 22. The structure of Claim 21, wherein means for
2 selectively enabling comprise a commutating mechanism
3 connectively biased by said locator to enable said
4 electromagnet when said electromagnet is not aligned with
5 said magnetic field.

1 23. The structure of Claim 22, wherein:

2 said electromagnetic radiations further comprise
3 light waves;

4 said means for collecting energy comprise a
5 photovoltaic collector responsive to said light waves
6 impinging upon said enclosure, and having an output
7 connectable to said electromagnet; and

8 said commutating mechanism comprises a shutter
associated with said locator, said shutter being shaped
and dimensioned to selectively mask said photovoltaic
collector when said electromagnet is aligned with said
magnetic field.

9 24. The structure of Claim 22, wherein:

10 said electromagnetic radiations further comprise
11 radio frequency waves;

12 said means for collecting comprise an antenna and
13 a radio frequency receiver generating an electrical
14 current when said antenna is exposed to said radio
15 frequency waves; and

16 said commutating mechanism comprises an electrical
17 impulse distributor responsive to the orientation of said
18 locator in relation to each of said electromagnets to
19 selectively apply said current to said electromagnet.

20 25. The structure of Claim 22, wherein said magnetic field
21 comprises the earth magnetic field.

1 26. The structure of Claim 22 which further comprises at
2 least one means positioned outside said enclosure to
3 generate said magnetic field.

1 27. The structure of Claim 8, wherein said gravity force
2 sensor comprises a weight rotatably connected to said
3 enclosure, said weight having a center of gravity held
4 distally from said axis.

1 28. The structure of Claim 3, wherein:

2 said electro-mechanical device comprises at least
3 one electromagnet and a commutating mechanism;

4 said locator comprises a weight rotatably
5 connected to said enclosure, said weight having a center
6 of gravity held distally from said axis; and

7 said commutating mechanism comprises gravity
8 switches responsive to the vertical orientation of said
9 electromagnet.

1 29. The structure of Claim 21, wherein said means for
2 selectively applying comprise a mechanism responsive to
3 the relative orientation of said magnetic field and the
4 direction of said ambient field of energy.

1 30. The structure of Claim 29, wherein:

2 said ambient field of energy comprising light
3 waves impinging upon said enclosure; and

said mechanism comprises:

at least two photosensors for producing control currents for said electromagnet;

each of said sensors having a photo-sensitive surface, wherein the photo-sensitive surface of each of said sensors lies within a different plane than the plane of the photo-sensitive surface of any other sensor.

31. The structure of Claim 30 which further comprises:

at least one photovoltaic collector having a photo-sensitive surface, and producing said feeding current.

32. The structure of Claim 10, wherein said electro-mechanical device comprises at least one electromagnet generating a polarizing magnetic field; and

which further comprises at least one coil proximate said means for detecting, and at least one switch wired to energize said coil and create a corrective magnetic field opposite to said polarizing magnetic field.

33. The structure of Claim 17, wherein said means for repeatedly enabling said sensor comprises means mounted of said magnetic field sensor, for generating a voltage having a polarity responsive to the orientation of said sensor.

34. The structure of Claim 1 which further comprises a pivot supporting said structure above a surface.